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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,900	09/09/2003	Larry E. Fischer	IL-11082	5644
7590 01/03/2006			EXAMINER	
Eddie E. Scott Assistant Laboratory Counsel Lawrence Livermore National Laboratory P.O. Box 808, L-703 Livermore, CA 94551			TRIEU, THAI BA	
			ART UNIT	PAPER NUMBER
			3748	
DATE MAILED: 01/03/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/657,900	Applicant(s) FISCHER ET AL.	
	Examiner Thai-Ba Trieu	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-15 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-15 is/are allowed.
- 6) ☒ Claim(s) 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to the Amendment After Final Rejection filed on December 14, 2005. Claim 20 was amended, and Claims 1-7, 16-19 and 21-47 were cancelled. In view of reconsideration, the indicated allowable subject matter of claim 20 has been withdrawn. A new Non-Final rejection set forth below.

Claim Objections

Claim 20 is objected to because of the following informalities:

- Line 18, “**by directing ...**” should be replaced by – **and directing...--**

(for correcting typo error).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Gadefelt (Patent Number 3,775,971).

Gadefelt discloses a combustion engine method that provides increased fuel efficiency and reduces polluting exhaust emissions by burning fuel in two stages, said fuel consisting of a first portion (Read as fuel injected into the combustion chamber, See

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Column 3, lines 17-23) and a second portion (fuel containing in exhaust gas in the exhaust manifold 10, See Column 3, lines 29-39), comprising the step of:

combusting said first portion of said fuel in a piston engine (1) in a first stage, said step of combusting said first portion of said fuel in a piston engine (1) in a first stage producing piston engine exhaust gases (in 10), said piston engine exhaust gases containing said second portion of said fuel, wherein said step of combusting said fuel in a piston engine (1) in a first stage comprises said fuel in a nitrogen enriched air combustion engine (See Figure 1, Abstract, and Column 3, lines 29-39);

combusting (Read as afterburner 12) said second portion of said fuel contained in said piston engine exhaust gases in said second stage turbine at stoichiometric conditions (Read as desired air/fuel mixture), said step of combusting said fuel contained in said piston engine exhaust gases in said second stage turbine at stoichiometric conditions engine producing turbine engine exhaust gases (See Column 3, lines 46-60); and

using said turbine engine exhaust gases (via 20 to 26) to supercharge said piston engine and directing said turbine engine exhaust gases into said piston engine (via 26 (See Figure 1).

Note that the exhaust gases are enriched with solid products such as non-combusted hydrocarbons, carbon monoxide and nitrous gases.

Allowable Subject Matter

Claims 8-15 are allowed.

Response to Arguments

Applicant's arguments with respect to claims 8-15 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Kim et al. (US Patent Number 6,470,864 B2) discloses a turbocharged engine with exhaust gas recirculation.
- Zehnder (US Patent Number 4,250,711) discloses a method and apparatus for supercharging an internal combustion engine.
- Gladden et al. (US Patent Number 6,301,889 B1) discloses a turbocharger with exhaust gas recirculation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
November 10, 2005



Thai-Ba Trieu
Primary Examiner
Art Unit 3748